

- 65 -

CLAIMS

1. A condition detection and display system, provided in traveling means that needs operation of a driver for traveling, for detecting a condition of the traveling means and surroundings around the traveling means and notifying the driver of detected condition of the traveling means and surroundings around the traveling means,

the system comprising:

display means for displaying images showing the condition of the traveling means and the surroundings around the traveling means, and a speedometer that gives readouts on speed of the traveling means,

wherein:

the images showing the condition of the traveling means and the surroundings around the traveling means are displayed at a position close to the speedometer.

2. The condition detection and display system according to claim 1, wherein:

the speedometer is displayed around a periphery or a part of the periphery of the images showing the condition of the traveling means and the surroundings around the traveling means.

- 66 -

3. The condition detection and display system according to claim 1, wherein:

the images showing the condition of the traveling means and the surroundings around the traveling means, contains
5 an image of the traveling means.

4. The condition detection and display system according to claim 3, further comprising:

10 direction detecting means for detecting a direction of a front end of the traveling means,

wherein:

on a basis of a detection result obtained by the direction detecting means, a direction of the image of the traveling means is changed.

15

5. The condition detection and display system according to claim 1, wherein:

20 the traveling means includes tires that transfer a drive force to a ground, and pneumatic pressure detecting means for detecting air pressure in the tires,

wherein:

if the air pressure in the tires is equal to or lower than a predetermined value, an image for notifying the driver of decrease in air pressure in the tires is displayed.

25

6. The condition detection and display system according to claim 1, further comprising:

distance detecting means for detecting a distance between the traveling mean and other object; and

5 means for grasping a shape of the other object,

wherein:

if there is an object approaching the traveling means at a distance equal to or less than a predetermined value from the traveling means, an image corresponding to the shape of 10 the object is displayed.

7. The condition detection and display system according to claim 1, further comprising:

relative speed detecting means for detecting a relative speed of other object relative to the traveling means; and

15 means for grasping a shape of the other object,

wherein:

if there is an object approaching the traveling means at a relative speed equal to or lower than a predetermined value, 20 an image corresponding to the shape of the object is displayed.

8. The condition detection and display system according to claim 6 or 7, wherein:

25 the predetermined value varies depending upon a speed

of the traveling means and/or a direction where the other object is located with respect to the traveling means.

9. The condition detection and display system according to claim 1, further comprising:

communications means for receiving ITS information,
wherein:

if the received ITS information contains information on surroundings around the traveling means, an image showing the surroundings around the traveling means, in accordance with the ITS information, is displayed at the position close to the speedometer.

10. The condition detection and display system according to claim 1, further comprising:

means for detecting whether the traveling means is moving,

wherein:

the images showing the condition of the traveling means and the surroundings around the traveling means are different depending upon a detection result obtained by the means for detecting whether the traveling means is moving.

11. The condition detection and display system according to claim 1, further comprising:

means for detecting a road marking marked on the road on which the traveling means, which is a vehicle, is moving, wherein:

5 a detected road marking is displayed as the image showing the surroundings around the traveling means.

12. The condition detection and display system according to claim 11, further comprising:

10 means for detecting a direction of a front end of the traveling means with respect to the road marking,

wherein:

the images showing the condition of the traveling means and the surroundings around the traveling means contain an image of the traveling means, and

15 a direction of the image of the traveling means is changed in accordance with the direction of the front end of the traveling means with respect to the road marking.

20 13. The condition detection and display system according to claim 3, further comprising:

means for detecting widths of roads around the traveling means, which is a vehicle; and

25 means for detecting a direction of a front end of the traveling means with respect to a widest road among the roads around the traveling means,

- 70 -

wherein:

in accordance with the direction of the front end of the traveling means with respect to the widest road, a direction of the image of the traveling means is changed.

5

14. The condition detection and display system according to claim 1 or 3, wherein:

the images showing the condition of the traveling means and the surroundings around the traveling means are graphic images.

10

15. The condition detection and display system according to claim 14, wherein:

the graphic images are able to be changed.

15

16. The condition detection and display system according to claim 15, further comprising:

an interface for receiving an instruction to change the graphic image.

20

17. The condition detection and display system according to claim 1, wherein:

the traveling means includes an engine as driving means, and means for detecting an instruction to start the engine,

25

wherein:

the images showing the condition of the traveling means and the surroundings around the traveling means are displayed in synchronization with the instruction to start the engine.

5

18. A condition detection and display method, in traveling means that needs operation of a driver for traveling, for detecting a condition of the traveling means and surroundings around the traveling means and notifying the driver of detected condition of the traveling means and surroundings around the traveling means,

10

wherein:

15 images showing the condition of the traveling means and the surroundings around the traveling means are displayed at a position close to a speedometer.

19. A control program for a condition detection and display system, provided in traveling means that needs operation of a driver for traveling, for detecting a condition of the traveling means and surroundings around the traveling means and notifying the driver of detected condition of the traveling means and surroundings around the traveling means,

20

the system comprising:

25 display means for displaying images showing the

- 72 -

condition of the traveling means and the surroundings around the traveling means, and a speedometer that gives readouts on speed of the traveling means,

5 the control program causing a computer to function as control means for controlling the display means to display the images showing the condition of the traveling means and the surroundings around the traveling means at a position close to the speedometer.

10 20. A computer-readable storage medium storing the control program for the condition detection and display system according to claim 19.